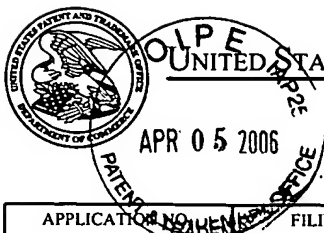


IPW



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,774	11/20/2003	Robert D. Mikkola	51853	8386

7590 03/24/2006
EDWARDS & ANGELL, LLP
P.O. Box 9169
Boston, MA 02209

EXAMINER

LEADER, WILLIAM T

ART UNIT PAPER NUMBER

1742

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,774

Applicant(s)

MIKKOLA ET AL.

Examiner

William T. Leader

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/27/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Receipt of the papers filed on December 27, 2005, is acknowledged. Claims 1-20 are pending. Claims 9-18 remain withdrawn from consideration.
2. Applicant's election with traverse of Group I in the reply filed on December 27, 2005 is acknowledged. The traversal is on the ground(s) that that any search of the composition will also include a search of methods o using that composition. This is not found persuasive because the searches are in fact not coextensive and would constitute an additional burden. As indicated in the office action, classification for the two groups of claims is different.

The requirement is still deemed proper and is therefore made FINAL.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Gandikota et al (US 2002/0112964) for the reasons of record and in view of the following comments.
5. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Rosen (*Fundamental Principles of Polymeric Materials*) for the reasons of record and in view of the following comments.

6. Applicant's Remarks have been carefully considered but are not deemed to be persuasive. Applicant argues that Grandikota fails to teach or suggest random ethylene oxide / propylene oxide copolymers that are purely random. Applicant interprets the expression "random/block copolymers" to mean that the copolymers are copolymers having random placement of blacks of each monomer unit. This interpretation is considered to be incorrect. Such an interpretation would result from the term "random-block copolymers" or "random block copolymers". The slash is properly interpreted to mean "or". Publication US 2005/0081744 uses the term "random/block copolymers of ethylene oxide and propylene oxide" in paragraph [0043]. Claims 8 and 27 recite "random or block copolymers". These claims indicate the correct interpretation of the expression used in the specification. Martyak et al (5,788,822) teach that polymer additives to an electroplating bath "may be random or block copolymers". See column 5, lines 54-57.

7. It is recognized that additives that function suppressors are generally polymeric surfactants. See for example Blachier et al (6,569,307) which states that "The suppressors are generally polymeric surfactants." See column 1, line 38. "A suppressor may be a surfactant or wetting agent and is sometimes called a carrier" - Sun et al (6,808,611); column 1, lines 62-64. "Including polymer based surfactants, such as the suppressors derived from PEG . . .". - Reid et al (6,793,796) at column 5, lines 30-34. Surfactants which are random copolymers are well-known. Anderson et al (5,798,331) describes block or random copolymers of ethylene or propylene glycol (column 4, lines 19-24). Borovian (4,607,036) teach that block or random copolymers or

polyoxyethylene and polyoxypropylene are suitable examples of nonionic surfactants (column 3, lines 33-35).

Claim Rejections - 35 USC § 103

8. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gankikota et al (US 2002/0112964) in view of Blachier et al (6569,307) and Anderson (5,798,331)

9. Gankikota et al is taken as above. As noted above Blachier et al teach that suppressors are generally polymeric surfactants. Anderson teaches that polymers with a polyalkylene oxide chain function as surfactants. Typically, where the polyalkylene oxide chain is a polyethylene glycol chain it will usually have 1 to 100, corresponding very approximately to chains derived from PEG 50 to PEG 2000, ethylene glycol residues and where it is a polyoxypropylene chain it will usually have 1 to 50 propylene glycol residues. Where the chain is block or random copolymer of ethylene and propylene glycol residues the chain length will chosen will typically correspond to the above ranges but numerically according to the proportion of ethylene and propylene glycol in the chain... See column, lines 7-29. The numeric values recited in claim 19 and 20 overlap the ranges disclosed by Anderson. It would have been obvious to have utilized a polyoxypropylene and polyoxyethylene random copolymer surfactant as the suppressor of Gankikota et al because Blanchier et al discloses that suppressors are generally polymeric surfactants and Anderson teaches that such copolymers are surfactants.

Art Unit: 1742

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 571-272-1245. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WL

William Leader
March 16, 2006

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700



Sheet 1 of 1

FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT				ATTY DOCKET NO. 51853		SERIAL NO. 10/717,774	
				APPLICANT(S): Mikkola et al.			
				FILING DATE: 11/20/2003		ART UNIT: 1742	
UNITED STATES PATENT DOCUMENTS							
EXAM. INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPR
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN YES/NO
	AA	1 069 210 A1	01/17/2001	Europe			
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)							
WL	BA	Odlan, <u>Principles of Polymerization</u> , 3 rd Edition, John Wiley & Sons, New York, 1991, pg. 143.					
WL	BB	Hiemenz, <u>Polymer Chemistry</u> , Marcel Dekker Inc., New York, 1984, pg. 12.					
Examiner: William Leader				Date: 3/16/2006			

Notice of References Cited

Application/Control No.

10/717,774

Applicant(s)/Patent Under
Reexamination
MIKKOLA ET AL.

Examiner

William T. Leader

Art Unit

1742

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,607,036	08-1986	Borovian, Gayle E.	514/277
*	B	US-5,788,822	08-1998	Martyak et al.	205/313
*	C	US-5,798,331	08-1998	Anderson et al.	510/501
*	D	US-6,569,307	05-2003	Blachier et al.	205/82
*	E	US-6,808,611	10-2004	Sun et al.	205/81
*	F	US-2005/0081744	04-2005	Klocke et al.	106/001.18
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

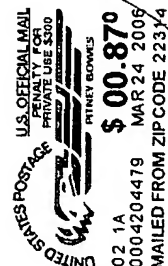
*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Organization **TC1700** Bldg./Room **REMPSEN**



U. S. DEPARTMENT OF COMMERCE
COMMISSIONER FOR PATENTS

P.O. BOX 1450

ALEXANDRIA, VA 22313-1450

IF UNDELIVERABLE RETURN IN TEN DAYS

OFFICIAL BUSINESS

AN EQUAL OPPORTUNITY EMPLOYER

3013 1 14 03/28/06

NOT DELIVERABLE TO SENDER
RETURN TO SENDER
UNABLE TO FORWARD
RETURN TO SENDER

RECEIVED
APR 05 2006
USPTO MAIL CENTER